

Curriculum Vitae

Prof. Karl Jakobs



Scientific career:

12/1984	Diploma in Physics, Bonn University
06/1988	PhD in Physics, University of Heidelberg, UA2 experiment at CERN
1988 – 1991	Fellow and staff member at CERN, UA2 experiment
1991 – 1996	Scientific staff member at the <i>Max-Planck-Institut für Physik</i> in Munich
1996 – 2003	Professor (C3, Associate Professor) of Experimental Particle Physics, University of Mainz
Since 04/2003	Professor (C4, Full Professor) of Experimental Particle Physics, University of Freiburg

Major current research activities:

- Data analysis in the ATLAS experiment
(Measurement of Higgs boson parameters, search for supersymmetric particles,
study of Standard Model processes)
- Construction of the upgraded silicon strip detector for the ATLAS experiment at the
High-Luminosity LHC
- Research and development on silicon detectors (DRD3 Collaboration)

Major completed research activities:

- UA2 Experiment (1988 – 1992), Investigation of QCD effects in W production
- ALEPH Experiment (1992 – 2000), Search for B^0_s oscillations (1993 – 1995) and search
for supersymmetric particles (1996 – 2000)
- ATLAS Experiment (since 1992), Detector development, liquid argon calorimeter, Level-1
calorimeter trigger (MPI Munich and Mainz) and silicon tracking detectors (Freiburg)
- ATLAS Experiment (2003 – 2006), Contributions to the construction of the ATLAS SCT
(Freiburg)
- DØ Experiment (2001 – 2007), Search for the Higgs boson and for supersymmetric particles
- ATLAS Experiment, Search for and discovery of the Higgs boson (2012)

Physics committee involvements

1994 – 1998	Member of the CERN SPS Programme Committee
1997 – 2003	Member of the DESY Programme Review Committee (PRC)
1998 – 2004	Member of the European Committee for Future Accelerators (ECFA)
2005 – 2008	Member of the US Particle Physics Project Prioritization Panel P5
2006 – 2012	Member of the Programme Review Committee of the German Funding Agency BMBF; Chairperson of the committee from 2009 – 2012
2006 – 2012	Member of the Board of German Particle Physics, KET
2006 – 2012	Elected Member of the Advisory Board (<i>Vorstandsrat</i>) of the German Physical Society (DPG)
Since 2009	Member in international scientific review committees of various institutes
2012 – 2017	Member of the High Energy Particle Physics Board of the European Physical Society (EPS-HEP Board)
2015 – 2017	Member of the Scientific Council (<i>Wissenschaftlicher Rat</i>) of DESY
2015 – 2017	Member of the CERN Scientific Policy Committee (SPC)
2021 – 2023	Chair of the European Committee for Future Accelerators (ECFA)

Leadership roles in research activities in Germany

2001 – 2003	Spokesperson of the DFG-Research Training Group " <i>Eichtheorien, experimentelle Tests und theoretische Grundlagen</i> " at the University of Mainz
2005 – 2014	Spokesperson of the DFG-Research Training Group " <i>Physik an Hadron-Beschleunigern</i> " at the University of Freiburg
2006 – 2007 and 2009 – 2010	Director of the Institute of Physics, Freiburg
2012 – 2016	Spokesperson of the BMBF research focus ATLAS (<i>BMBF Forschungsschwerpunkt ATLAS</i> , FSP-101 and FSP-103) (13 German universities, DESY, Max-Planck Institute of Physics Munich)

Leadership positions in Experimental Collaborations

1990 – 1991	Offline coordination, UA2 experiment
1997 – 2002	Convenor of the ATLAS Higgs physics working group
1999 – 2001	Member of the ATLAS Collaboration Board Advisory Group
2000 – 2003	National Contact Physicist of the German groups in the DØ experiment
2001 – 2003	Chairperson of the ATLAS <i>Speakers Committee</i>
Since 2001	Chairperson of several ATLAS <i>Task Forces</i>
2006 – 2007	Deputy Physics Coordinator of the ATLAS experiment
2007 – 2008	Physics Coordinator of the ATLAS experiment
2012 – 2016	National Contact Physicist for Germany (BMBF) in the ATLAS Experiment
2015 - 2021	Member of the ATLAS Executive Board
2017 – 2021	Spokesperson of the ATLAS Collaboration at CERN

Other activities

- *Visiting Professor* at the *Institute for Particle Physics Phenomenology (IPPP)* of the University of Durham / England (since May 2008)
- External Member of the Royal Swedish Academy of Sciences at the University of Uppsala (since June 2008)
- External Member (Principal external investigator) of the Australian Centre of Excellence for Particle Physics at the Terascale (CoEPP, 2011 – 2018) and of the Centre of Excellence for Dark Matter Particle Physics (CDMPP, since 2019), (both led by the University of Melbourne)

Awards

- Stern-Gerlach Medal 2015 of the German Physical Society (DPG) “for significant contributions to the discovery of the Higgs boson”